

# Delphi Series L36SA, 2"x1.6", 50W Family DC/DC Power Modules: 18~75Vin, 3.3V, 5V, 12Vout

The Delphi Series L36SA, 2"x1.6", 18V~75V input, single output, isolated DC/DC converter is the latest offering from a world leader in power systems technology and manufacturing - Delta Electronics, Inc. The L36SA series provides up to 50 watts of power or 15A of output current (3.3V) in an industry standard 2x1.6 form factor and pinout. The Delphi L36SA series operates from a wide 18V to 75V (4:1) input voltages. With creative design technology and optimization of component placement, these converters possess outstanding electrical and thermal performance, as well as extremely high reliability under highly stressful operating conditions. All models are fully protected from abnormal input/output voltage, current, and temperature conditions. The Delphi Series converters meet all safety requirements with basic insulation. An optional heat spreader is available for extended operation.

#### **FEATURES**

- High efficiency: 89% @ 5V/ 10A
- Size: 49.6mm x 39.4mm x 8.9mm (1.95"x1.55"x0.35")
- Industry standard pin out
- Fixed frequency operation
- Input UVLO, OTP, Output OCP, OVP (auto-restart)
- Monotonic startup into normal and pre-biased loads
- 2250V isolation and basic insulation
- No minimum load required
- 4:1 input voltage range
- ISO 9001, TL 9000, ISO 14001, QS9000, OHSAS18001 certified manufacturing facility
- UL/cUL 60950 (US & Canada)
   Recognized, and TUV (EN60950) certified
- CE mark meets 73/23/EEC and 93/68/EEC directives

## **OPTIONS**

- Positive On/Off logic
- Sense
- Heat spreader

## **APPLICATIONS**

- Telecom/DataCom
- Wireless Networks
- Optical Network Equipment
- Server and Data Storage
- Industrial/Test Equipment



## **SPECIFICATIONS**

GENERAL SPECIFICATIONS			OUTPUT SPECIFICATIONS			
Input Voltage		18~75V	Voltage Accuracy	Typical	±1%	
Switching Frequency	Typical (5V)	300KHz	Line Regulation	Typical	±0.1%	
Isolation Voltage	In/Out	2250V	Load Regulation	Typical	±0.1%	
Isolation Capacitance	Typical	1500PF	Ripple & Noise	Typical	50 mV	
Isolation Resistance	Minimum	<b>100M</b> Ω	Current Limits	Typical	130%	
MTBF	Bellcore (3.3V)	3.72M hrs	Over Voltage	Typical	120%	
OTP	Typical	115°C	Voltage Trim		+10%, -10%	
Size	(1.95"x1.55"x0.35")	49.6x39.4x8.9mm				

#### **PART NUMBERING SYSTEM**

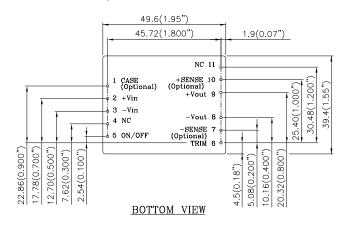
L	36	S	Α	050	10	N	R	F	Α
Type of	Input	Number of	Product	Output	Output	ON/OFF	Pin		Option Code
Product	Voltage	Outputs	Series	Voltage	Current	Logic	Length		
L - 2 x 1.6	18~75V	S - Single	A - 50W	3R3- 3.3V	04- 4A	N- Negative	R- 0.170"	F- RoHS 6/6	A- Standard
Brick			platform	050- 5.0V	10- 10A	P- Positive		(Lead Free)	Functions
				120- 12V	15- 15A			(2000 : :00)	B- With sense

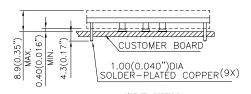
#### **MODEL LIST**

MODEL NAME	INPUT		OUTPUT		EFF @ 100% LOAD
L36SA3R315NRFA	18V~75V	2.1A	3.3V	15A	88%
L36SA05010NRFA	18V~75V	1.9A	5.0V	10A	89%
L36SA12004NRFA	18V~75V	1.9A	12V	4A	87.5%

#### **MECHANICAL DRAWINGS**

## **Open Frame Version**





<u>SIDE VIEW</u>

NOTES:
DIMENSIONS ARE IN MILLIMETERS AND (INCHES)
TOLERANCES: X.Xmm±0.5mm(X.XX in.±0.02 in.)
X.XXmm±0.25mm(X.XXX in.±0.010 in.)

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#### **WARRANTY**

Delta offers a two (2) year limited warranty. Complete warranty information is listed on our web site or is available upon request from Delta. Information furnished by Delta is believed to be accurate and reliable. However, no responsibility is assumed by Delta for its use, not for any infringements of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Delta. Delta reserves the right to revise these specifications at any time, without notice.